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# Victorian Entomologist



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The Entomological  
Society of Victoria

## THE ENTOMOLOGICAL SOCIETY OF VICTORIA (Inc) MEMBERSHIP

Any person with an interest in entomology shall be eligible for Ordinary membership. Members of the Society include professional, amateur, and student entomologists, all of whom receive the Society's News Bulletin, the Victorian Entomologist.

### OBJECTIVES

The aims of the Society are:

- (a) to stimulate the scientific study and discussion of all aspects of entomology,
- (b) to gather, disseminate and record knowledge of all identifiable Australian insect species,
- (c) to compile a comprehensive list of all Victorian insect species,
- (d) to bring together in a congenial but scientific atmosphere all persons interested in entomology.

### MEETINGS

The Society's meetings are held at Clunies Ross House, National Science Centre, 191 Royal Parade, Parkville, Victoria, at 8 p.m. on the third Friday of even months, with the possible exception of the December meeting which may be held earlier. Lectures by guest speakers or members are a feature of many meetings at which there is ample opportunity for informal discussion between members with similar interests. Forums are also conducted by members on their own particular interests so that others may participate in discussions.

### SUBSCRIPTIONS

Ordinary Member	\$20.00
Country Member	\$16.00 (Over 100 km from GPO Melbourne)
Student Member	\$12.00
Associate Member	\$ 5.00 (No News Bulletin)

No additional fee is payable for overseas posting by surface mail of the news bulletin. Associate Members, resident at the same address as, and being immediate relatives of an ordinary Member, do not automatically receive the Society's publications but in all other respects rank as ordinary Members.

Cover Illustration by Jenny Browning, 1992  
*Ogystis* sp (?) from Lake Douglas, near Kalgoorlie, WA.

## MINUTES OF COUNCIL MEETING, 13 DECEMBER 1991

The President, Ross Field, requested a special meeting of Council to discuss a single agenda item. The meeting opened at 7.30pm.

**Present:** J. Burns, P. Carwardine, D. Crosby, K. Dunn, I. Faithfull, M. Hunting, P. Kelly, G. Krake, M. Malipatil, T. New, K. Walker, B. Vardy

**Business:** The only business for the meeting was to ratify the members of the Zoo LeSouef Memorial Award Subcommittee. The question arose that when Tim New was listed on the Zoo Le Souef Memorial Award Subcommittee, was it due to the position he held (Honorary Secretary) or as himself. After some discussion the following was agreed:

(1) A motion was moved that:

"Membership to consist of the President, the Immediate Past President and two other members, to be elected annually by the Council at its first meeting following the Annual General Meeting (where expressions of interest in serving on the Subcommittee are to be sought), or if an interim vacancy occurs at the Council meeting at which that vacancy is notified."

Moved: I. Faithfull; Seconded: K. Dunn

Carried.

(2) To accept the members of the committee as were previously minuted (*Vic. Ent.* 21(2): 43): i.e. President, Past President, Tim New and David Crosby.

The meeting closed at 8.05pm

## MINUTES OF GENERAL MEETING, 13 DECEMBER 1991

The President, R. Field, opened the meeting at 8.13pm.

**Present:** J. Burns, P. Carwardine, D. Crosby, D. Dobrosak, K. Dunn, I. Endersby, I. Faithfull, A. & E. Farnworth, P. Kelly, G. Krake, D. & J. Holmes, P. Honan, M. Hunting, M. Malipatil, T. Morton, R. Vagi, J. Wainer, K. Walker  
Visitor: E. Grey.

**Apologies:** L. Dunn, T. New

**Minutes:** Minutes of the October General Meeting (*Vic. Ent.* 21: 141-142.) were passed. (Kelly/Krake)

The December meeting is a members' exhibit night and Ross Field asked for exhibits to be presented.

## General Business

### Exhibits:

1. Ian Faithfull presented a box of melolonthine beetles and commented on the classification difficulties within the group. He also read out a letter received from E. Britton commenting that the selection of beetles represented 25 new species.
2. David Holmes talked on his antheiid moth display and later spoke on problems encountered by fruit tree weevils. He also told members of a wooden insect cabinet currently for sale.
3. Tony Morton displayed a box of butterflies from south of Bunbury, the Stirling Range area and a few specimens from Tasmania.
4. Ross Field showed specimens from his recent trip to Western Australia. Included were specimens of *Ogyris idmo* (Mt. Ragged), *O. otanes* (east of Cape Arid) and a new species of *Trapezites* from the Southern Cross region.
5. Peter Carwardine reported contact with Ray Besserdin, a past member, and showed a cicada and beetle.
6. Ken Walker showed a series of slides depicting a spliciid wasp transporting a spider for nest provisioning. The photos also showed the use of grass stems to close off the cell.
7. Arthur Farnworth presented an excellent series of photographs of Saunders' Case moth *Oiketicus elongatus* detailing how the larva adds a piece of twig to its case.
8. Pat Honan spoke to slides showing the emergence of a cicada from its shell then showed a series of slides of insects and spiders he recently took while on holidays.
9. Ian Faithfull showed several slides of butterflies, beetles and ants from the Willandra National Park.
10. Joyce Holmes reported on the health of Mary LeSouef.
11. Peter Carwardine and Arthur Farnworth commented on the Wattle Park development situation.

### Correspondence:

Detailed. Note: Members are eligible to purchase books produced by Melbourne University Press at a substantial discount. Please write to the Secretary with requests. Received Vardy/Kelly.

**Treasurer's Report:** Financial Statement for 13 December 1991 was received as follows:

General Account	\$1398.13
Le Souef Award Account	\$2037.57
Junior Encouragement Fund	\$ 470.58
Membership	134
Subscribers	10

Received Carwardine/Dunn.

**Editor's Report:** M. Malipatil reported on the production of the *Vic. Ent.* through Agmedia and commented on the inclusion of a half tone. He called for more articles for the following issue. Ian Faithfull has agreed act as temporary editor while Mali is absent on leave.

**Excursions:** Peter Carwardine spoke on the success of the excursion to Braeside park and requested those who attended to provide him with species lists.

**Other Business:** The following series of motions were moved by I. Faithfull and all were seconded by K. Dunn. (The motions were moved during the General Business section of the meeting but minuted under Other Business.) After each motion was read and seconded, the general meeting discussed the motion and was requested to vote on each motion -

1. "That P. Carwardine be reimbursed costs of travelling to Clunies Ross House on 15 November, having not been informed that the President and Secretary had cancelled the Council meeting scheduled for that day."

Not Carried.

2. "That this meeting censure the Secretary and President for their decision to cancel the Council Meeting scheduled for November 15, due in their words to there being "no business", and for failing to provide notice of the cancellation to some Council Members and adequate notice to others, noting that the Constitution and Rules require that seven days notice of meetings is to be given to members by the Secretary."

Not Carried.

3. "That the President, Secretary and Treasurer immediately commence to conduct General Meetings in accordance with the requirement (Item 4) in the Constitution and Rules that applicants for membership "shall be nominated and seconded by two financial members at any Annual or Ordinary Meeting and shall be elected at the succeeding meeting" etc., and that full details of the nominations and elections be included in the Minutes of the meetings at which they occur, and that the backlog of applications for membership not so dealt with be brought before the next General Meeting."

Carried.

The President wished all members a Merry Christmas and a successful New Year.

The meeting was closed at 9.32pm.

NOTES ON THE JUMPING SPIDER *BREDA JOVIALIS* (KOCII)  
(ARACIINIDA: SALTICIDAE)

Trevor J Hawkeswood

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**Abstract:** A brief description is provided and some biological notes are reviewed on the jumping spider, *Breda jovialis* (Koch) (Salticidae), which inhabits woodlands/dry sclerophyll forests in the Brisbane area (Queensland).

*Breda jovialis* (Koch) is a distinctive, hark-inhabiting jumping spider from eastern Queensland, New South Wales, Victoria and Tasmania. The general body colour is black with bluish sheen (especially on the cephalothorax) and it is clothed with brownish-yellow to yellowish-white hairs; the abdomen is black with a narrow transverse band of whitish scales on the basal portion of the dorsal surface, and on the posterior half of the abdomen there are two similar golden transverse bands and between them a large golden-yellow blotch with a pair of lateral projections. Above the spinnerets is a brownish-yellow diamond-shaped patch. The femora of the legs are black but the other leg segments are reddish-yellow. The male is similar in colour pattern and shape, but it is smaller and the golden-yellow spot between the two transverse bands on the posterior dorsal half of the abdomen is triangular in shape (Hickman 1967). The males measure 6-7 mm in total body length and the females 8-9 mm. A colour illustration of the female is provided by Mascord (1983: 27, plate 33) and a black/white photograph of a female by Hickman (1967: 88).

The species was described in 1879 by Koch (1871-1883) but since then, there has been little input into the biology of the species by later workers. Hickman (1967: 87,89) noted that the spider was often found on the fences and outside walls of houses in residential areas but that it also occurred under the loose bark of trees in many localities in Tasmania; Hickman (1967) also illustrated the "nest" made by *B. jovialis*, which is composed of strong yellowish-coloured silk and is almost circular in shape with a short, cylindrical entrance on opposite sides. Hickman (1967:89) also noted that in the bush, the "nests" are generally made under the loose bark of eucalypts and on fences they are made in spaces between the palings and the

(support) boards. Mascord (1983: 26) also noted that these spiders occur under the bark of eucalypts but both he and Hickman (1967) do not provide any specific details. Mascord (1983) also noted that the creamy-coloured egg-sac is round in shape and about 9 mm in diameter with a tunnel leading in on opposite sides; Mascord (1983) reported that the egg-sac contains 25-40, non-glutinous, dark cream-coloured eggs, each measuring about 0.9 mm in diameter. The spider matures in spring and summer (Hickman 1967) and feeds on small insects (Mascord 1983).

During a survey of the spider fauna of the Brisbane area (Queensland) during early 1988, I found this spider to be rare and confined to the underneath surfaces of exfoliating bark of *Eucalyptus tereticornis* Sm. (Myrtaceae). Previous authors have not commented upon the fact that this salticid is an ant-mimicking species. These brightly coloured spiders with the distinctive abdominal markings, closely match the colour pattern of various species of ants (e.g. *Polyrachis*) which share their habitats. Like other ant-mimicking spiders, they feed upon ants as well as the young and adults of other small invertebrates (insect and spiders) that occur underneath the bark. The adults of *B. jovialis* are very wary and are difficult to catch as they scurry away to cover under bark or debris at the slightest disturbance. The habitat at Brisbane for this spider is dry sclerophyll forest merging into open woodland.

#### References

- Hickman, V.V. 1967. *Some Common Tasmanian Spiders*. Tasmanian Museum & Art Gallery, Hobart.
- Koch, L. 1871-1883. In: Koch, L. & Keyserling, E. *Die Arachniden Australiens*. Bauer & Raspe, Nürnberg.
- Mascord, R. 1983. *Australian Spiders in Colour*. A.H. & A.W. Reed, Sydney.

NOTES ON THE SEXUALLY DIMORPHIC JUMPING SPIDER  
*BAVIA LUDICRA* (KEYSERLING) (ARACHNIDA: SALTICIDAE)

Trevor J. Hawkeswood

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**Abstract:** The sexes of the jumping spider, *Bavia ludicra* (Keyserling) (Salticidae) are briefly described and compared and the biology of the species is reviewed.

*Bavia ludicra* (Keyserling) is one of the most widespread of the Australian jumping spider fauna, ranging from north-eastern Queensland to Tasmania (Mascord 1983: 30). Hickman (1967: 85) noted that this spider was probably the largest jumping spider found in Tasmania.

The sexes are so different in colour pattern of the abdomen and cephalothorax that they were originally described as separate species (Mascord 1983) although Hickman (1967: 87) earlier stated that the spider described by Keyserling (1882:1328) as the male appeared to belong to a different species. The females are greyish-brown to dark brown in colour, with the body and legs covered with a sparse to dense covering of white and grey hairs; the abdomen is greyish-brown on the lateral margins and dark brown on the dorsum which surrounds a broad, white/cream, longitudinal stripe which is serrated deeply towards the apex. The male is darker in colour with the carapace adorned with white stripes on the lateral margins near the eyes and along the anterior margin; the dorsal surface of the abdomen possesses a number of transverse bands, one at the base, two irregular and often broken bands at or near the centre of the dorsum and a narrow band at the apex; the two central bands are usually fused in the centre as well. Hickman (1967: 85, 87) has provided the most detailed description of the two sexes. The males measure 9-10 mm in body length while the females measure 12-14 mm long. Mascord (1983: 31, plates 39 & 40) illustrated in colour the dorsal views of the male and female respectively while Hickman (1967:88, fig. 2) earlier provided a black-white plate which highlighted the dimorphic colour pattern of the spider and leaves little doubt as to its identification. Clyne (1974:99) illustrated the female (colour plate 52) and the male (colour plates 53 and 54) but incorrectly identified the specimens as two separate *Opisthoncus* species.



These spiders are usually found under the loose bark of *Eucalyptus* species (Hickman 1967; Clyne 1974; Mascord 1983). The eggs and life-stages have not been recorded. I have only collected females of this species from the Brisbane area, Queensland, where they have been collected from under the exfoliating bark on the main trunks of *Eucalyptus signata* F. Muell. (Scribbly Gum) and *E. tereticornis* Sm. (Blue Gum)(Myrtaceae) and occasionally in the curled-up fallen bark on the ground on in the bark which has been caught up in other vegetation. Hickman (1967: 87) noted that males and females are sometimes found together during September and early spring in Tasmania. I have not found males together with females in the retreats but this may be due to coincidence. The retreats of *B. ludicra* measure 32-36 mm long and 16-20 mm wide, are oval-shaped and composed of strong white silk. I have discovered several of them but although all contained a mature female, none possessed a male or eggs. Mature female spiders feed on various bark-dwelling insects and spiders; one female I held captive, lived for about 3 months and fed upon other salticids (*Ocrisiona* spp.) and other small spiders that were offered.

#### References

- Clyne, D. 1974. *A Guide to Australian Spiders*. Nelson, Melbourne.
- Hickman, V.V. 1967. *Some Common Tasmanian spiders*. Tasmanian Museum & Art Gallery, Hobart.
- Keyserling, E. 1882. *Die Arachniden Australiens*. Bauer & Raspe, Nürnberg.
- Mascord, R. 1983. *Australian Spiders in Colour*. A.H. & A.W. Reed, Sydney

FURTHER NOTES ON THE OCCURRENCE OF THE WOOD WHITE BUTTERFLY  
IN THE WIDE BAY AREA OF QUEENSLAND

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During the months of August to October 1990, I observed and captured three Wood White butterflies (*Delias aganippe*) from the Maryborough region of Queensland which I discussed in a previous article (Fox 1991).

Since October 1990 until about the time of writing (September 1991) there have been only two sightings of the Wood White in this area. I sighted two males flying around mangroves on 3 September at Mary River Heads (30 km ENE of Maryborough) and on 12 September, I sighted a female flying around eucalyptus trees at Pialba (32 km NE of Maryborough).

On 15 September, with another butterfly collector, Bruce White, at Saltwater Creek (on the Hervey Bay road just out of Maryborough), three adults were seen flying around mangroves. One was netted for reference and to confirm the identification. Although a suitable food plant for the Wood White occurs at Saltwater Creek, no larvae or pupae were found on the mistletoes examined. The late Joe Manski (1960) stated that the host in Maryborough was "*Loranthus linophyllus*", listed as *Amyema linophyllum* in Common and Waterhouse (1982). Kelyvn Dunn (pers. comm.) says that it was at Saltwater Creek where Joe Manski saw the female laying and obtained eggs which he reared to adults.

I suggested (Fox 1991) that a small number of vagrants ended up in the Wide Bay area in 1990. I now think that some of these established small populations, which could explain the additional sightings at different places. I haven't had the time to investigate Marroom (19 km E of Maryborough) for evidence of them flying this year, but they are probably fairly generally dispersed in the Wide Bay region and could be expected at Marroom also. Such periodic populations may be an irregular phenomenon in favourable seasons. It will be interesting to see for how many seasons the populations will persist.

All my observations are from August to October. Joe Manski only once found this butterfly near Maryborough, in November, but recently I have heard that Murdoch De Baar collected a specimen at Saltwater Creek in September, 1987. Jean Harslett and Dennis Reeves in their article on butterflies from Fraser Island (1971), recorded the presence of this species during August. In the Wide Bay area the butterfly seems to have a late winter-spring appearance. Dunn and Dunn (1991) showed in their temporal data charts for the Dawson phytogeographic region that adults have been taken in all months, although the main appearance is in May-June and from August to December. (The Wide Bay district is situated in the southern section of the Dawson region - see Dunn and Dunn 1991, figure 2, p.59).

I invite others to write to me concerning any new references to this butterfly in Queensland in the past year.

#### Acknowledgments

I would like to thank Kelvyn Dunn and Bruce White for their help and advice.

#### References

- Common, I.F.B. & Waterhouse, D.F. 1982. *Butterflies of Australia*. (Field Edition). Angus & Robertson, Sydney.
- Dunn, K. L. & Dunn, L.E. 1991. *Review of Australian Butterflies*. Privately published, Melbourne.
- Fox, P.J. 1991. The occurrence of the Wood White butterfly in central Queensland. *Victorian Entomologist* 21 : 14-15.
- Harslett, J. & Reeves, D.M. 1971. Notes on butterflies from Fraser Island, August 1971. *Queensland Naturalist* 21: 5-6.
- Manski, M.J. 1960. Food Plants of some Queensland Lepidoptera. *Queensland Naturalist* 16 : 68-73.

MELANITIS LEDA BANKIA (FABRICIUS) (LEPIDOPTERA: NYMPHALIDAE)  
IN THE SYDNEY DISTRICT

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*Melanitis leda bankia*, familiarly known as the Evening Brown butterfly, is common throughout northern Australia and adjacent to the east coast from Cape York south to at least Port Stephens, NSW. Further south it is rare and has only been taken occasionally at Sydney (Common and Waterhouse 1982). Dunn & Dunn in their recent (1991) monograph gave the most southern limit as Bundeena, derived from Smithers (1975).

Smithers (1975) stated that during the seasons of 1969-70 and 1973-74 several specimens had been captured in the Sydney area. Waterhouse's (1925) report on butterflies from the Royal National Park, NSW, didn't say that *Melanitis* was found in the park but stated: "Many other species have been taken at Como, Sutherland ... most of which doubtless also occur in the park"; but this statement probably was not meant to include the Evening Brown. Rose in a more recent list (1970) for the Ku-ring-gai Chase National Park, an area of hushland on the northern outskirts of Sydney, did not initially list this species. However in a second paper (1972) he reported it for the month of November but did not comment further. It is possible that in the future, vagrant *Melanitis* may also be found in the Royal National Park.

During my visit to Sydney in September 1990, I came across a male *Melanitis* in the Elouera Natural Park, Pennant Hills. It was a warm day, about 24-25°C and the time was around 2 p.m.. I was observing some *Hypocysta metirius* (Common Brown Ringlet) flying around and resting on some very large leaves of grass (perhaps *Imperata* sp.), the grass being about a metre high. I swung my net, capturing a Common Brown (*Heteronympha merope*), when a brown butterfly flashed from amongst the grass and rested in a shady patch. When finally caught, I realised it was a male *Melanitis leda bankia*.

Only one specimen was found and it is unknown whether the adult had bred in that part of Sydney. It was in good condition, perhaps suggesting it had not travelled far. The specimen was of the winter form and is now in my collection. Smithers (1975) said that the species is not usually a migrant although migration can still occur and cited examples of specimens reaching New Zealand.

There appear to be a number of records of this butterfly from near Sydney since the late 1960's and it is probably safe to say that temporary populations may establish in favourable years. Its increasingly frequent appearance in Sydney needs investigation as it is not listed by Waterhouse and Lyell (1914) and is evidently a more recent addition to the Sydney fauna. In support of this, Kelvyn Dunn (pers. comm.) says that all museum records south of Port Macquarie which he has seen are post 1968.

I invite others to write to me if any more *Melanitis* are captured in the Pennant Hills area or nearby, or if they have found evidence of breeding populations in the Sydney area.

#### Acknowledgment

I would like to thank Kelvyn Dunn for assistance with references and his information on museum records.

#### References

- Common, I.F.B. & Waterhouse, D.F. 1982. *Butterflies of Australia*. (Field Edition). Angus & Robertson, Sydney.
- Dunn, K.L. & Dunn, L.E. 1991. *Review of Australian Butterflies*. Privately published, Melbourne.
- Rose, A.B. 1970. Butterflies observed in Ku-ring-gai Chase National Park, New South Wales. *Proceedings of the Royal Zoological Society NSW* 1968-69 : 48-50.
- Rose, A.B. 1972. Additional records of butterflies from Ku-ring-gai Chase National Park, New South Wales. *Australian Entomological Magazine* 1 : 5-6.
- Smithers, C.N. 1975. *Melanitis leda bankia* (Fabricius) (Lepidoptera: Nymphalidae) in Sydney and on Norfolk Island. *Australian Entomological Magazine* 2 : 110-111.
- Waterhouse, G.A. 1925. List of butterflies from Royal National Park. *Australian Zoologist* 4 : 38-42.
- Waterhouse, G.A. & Lyell, G. 1914. *The Butterflies of Australia*. Angus & Robertson, Sydney.

## NOTES ON THE SILVER CICADA *CICADETTA CELIS* MOULDS

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**Abstract:** Notes on the biology and courtship behaviour of *Cicadetta celis* Moulds are provided with the first record of sound production and wing flicking in females of this species. Observations on the male song duration and the first record of the male distress call are reported.

### Introduction

It is well known that male cicadas produce audible sounds with their tymbals which they use to attract females (Moulds 1990). Females are believed not to make such sounds as they lack these structures, although Moulds (1990) reported that both sexes are capable of 'wing clapping' and females often attract nearby males by this method before mating. Moulds (1990) cited the Western Australian example *Cicadetta quadricincta* (Walker) derived from Gwynne (1987); previously the only species in which communicating by wing clapping had been recorded. To this, Moulds (1990) added the bent-winged cicadas *Froggattoides* species and *C. stradbrogensis* (Distant), and suspected other species may behave similarly. Wing clapping has been little studied and the precise means of sound production has not yet been explained. To these records, I will add my own observations on mate attraction in females of *Cicadetta celis* Moulds at Dandenong and Burnley Victoria where the species is locally common.

### General notes and distribution

The type locality for *Cicadetta celis*, described in 1988, is Dandenong and the holotype and allotype were based on my own material. Near Melbourne, adults can be encountered from the last week of November to the first week of February, but are most abundant during December and January. I have taken specimens at a number of suburban sites from Fountain Gate in the south-east, northward to Burnley [about 5 km E of Melbourne CBD] and east to

Nunawading. At all sites it is locally abundant but, surprisingly, I have not yet found populations beyond suburban gardens in the adjacent bushland remnants near Melbourne. It is a common species in the eastern and south-eastern suburbs as well as close in to the city and is found in parklands, gardens and even parking lots of major shopping complexes. In far eastern Victoria I have encountered it in numbers amongst a thicket of *Leptospermum phyllicoides* in natural bushland at the Mitchell River National Park near Glenaladale, and in coastal heathland at Loch Sport. I am quite familiar with this species and can immediately separate the call from sympatric species, at least in this part of its range. In Australia, it occurs broadly from Warwick Queensland south to Melbourne Victoria (Moulds 1988).

Moulds (1990) did not give a common name but as it is a very familiar sound during the summer months in the Melbourne metropolitan area, a popular name seems appropriate. When alive and fresh, both sexes, especially females, have a prominent metallic, silvery pubescence near the cruciform elevation and especially on the lateral sides of the abdomen, as well as other parts of their bodies, so I think the name 'silver cicada' is appropriate.

This silver pubescence appears to be lost as the living adult ages and eventually becomes rather inconspicuous on preserved material. The black and white figures by Moulds (1988) illustrated this silvery sheen very well, especially in the holotype male and it appears that they were taken soon after the insect's death. However, in the color plates of this species (see Moulds 1990) this silver pubescence is only faintly visible and more so on the female abdomen than that of the male. The color plate of at least the female appears to be based on a different photograph and different individual, almost certainly older specimens than the age of the types at the time of photographing for Moulds (1988).

#### Song and behaviour

Moulds (1990) reported that most cicadas have a pulse repetition frequency (PRF) of 100-400 pulses per second, with extremes measured from 40-1000 pulses per second. My observations on the audible song do not reflect the PRF as detection of these pulses requires an oscilloscope, but as cicadas can be distinguished by their songs in the field, a description of the audible song is still useful.

The male of *C. celis* emits a slow repeated 'ch.ch.ch.ch.ch' like a high pressure jet sprinkler system but less rapid and more continuous. In captivity, between 26-31 distinct 'ch' sounds are often produced per session but I have counted up to at least 36 'ch'. The number of 'ch'

sounds does, however, appear to vary with the individual concerned as some adults average only between 9-14 'ch' sounds between pauses. The duration for 28 'ch' was timed and lasted 11 seconds, indicating that up to about 3 discernible 'ch' sounds can be distinguished per second and probably only reflects the limits of my hearing ability rather than the true song. Pauses of about 15 seconds often occur between call sessions when not disturbed. After a series of sessions the male will frequently shift to another vantage point a few metres distant and commence again. The 'ch' sounds are regularly spaced but increase in frequency halfway through and again towards the end of a session. Each song session usually lasts about 10 seconds. The loudness does not vary and I estimate this [without use of a meter] at about 60-70 db. It is not loud.

The males seem to be encouraged to sing in slightly increased temperature during sunny periods but are wary of being approached and usually cease sound production immediately. Males are often encountered in local aggregations of several individuals in adjacent trees and absent from areas further away. They sometimes appear to respond to artificially similar sounds. I have, for example, observed small concentrations of males singing in the close vicinity of the jet sprinkler hoses in the Burnley Gardens near Richmond on a few occasions.

Stridulation frequently occurs when firmly holding males but this almost certainly serves as a distress signal and has a frantic-erratic or urgent note to it. It consists of a rapid sequence of 'ch.ch.ch' noises of higher frequency and slightly higher pitch. Similar distress calls are known among other cicadas in Australia (see Moulds 1990) but have not previously been recorded for any *Cicadetta* species.

Adults are easy to take by hand once sighted in the bushes and generally are settled within 1-3 metres of the ground. They settle on many kinds of shrubby bushes but appear to prefer those of thick and dense foliage similar to that present on *Leptospermum* and *Melaleuca*, although adults have been found settled on fence posts and other wooden objects. The larval hosts are unknown and I have not yet found any exuviae or possible emergence holes.

#### **An observation of female sound production**

Sexual dimorphism in this cicada is among the most extreme in the Cicadidae (Moulds 1988) and illustrations of both sexes were presented by Moulds (1988, 1990). Females of *C. celis* are



rarely taken. Moulds (1988) cited seven female paratypes (including the allotype), two of which were taken by myself and one by my sister [S.J. Dunn] at the type locality; the remaining four were by other collectors. Since these, I have only taken one further female on which the following observations are based. I recall being attracted to at least one of these earlier females by sound production. I mentioned this in person to Max Moulds in October 1983 and he suggested the most likely explanation was that a male was very near and I sighted the female unintentionally whilst homing in on the male. I later questioned my sister concerning the capture of her female but she reported it was settled on a fence and could not recall how her attention was directed to it. It would seem that the cicada was conspicuous rather than audible. I remained, however, still certain that the female taken was responsible for the sound I heard as I recalled it as slightly different.

Both sexes in cicadas can detect sound but females are said to have directional hearing (Moulds 1990). The hearing of cicadas is tuned to their own congeners and that of others is filtered out. I have now obtained evidence of sound production by an unknown mechanism in the female of this particular cicada. On 8 January 1992 at Burnley Gardens near Richmond I heard what sounded like a cicada which appeared new to me. I have previously heard two similar sounding calls at Burnley, one is *C. celis* and the other is yet to be determined as I have not secured an adult, but I suspected it to be *Pauropsalta mneme* (Walker). The 'new' call emanating from a *Melaleuca styphelioides* was similar to that of the male *C. celis* but was softer and the 'ch' sounds were irregularly timed. I was excited and convinced this was another species I had not yet encountered and I was able to contrast the sound with a *C. celis* male singing simultaneously some 10 metres away and recognized the two songs as similar but quite discernible. The song was also different to the *Pauropsalta* species in the area. It repeated several sessions allowing me to track down and sight the adult amongst the shrubbery.

The cicada was observed chirping whilst I considered the best approach for securing the adult. During this time, I reconfirmed that the origin of the sound was in fact from the individual concerned, and not another individual. It was too high for me to observe with unaided vision how the sound was actually being produced and at that moment I was not concerned. My main interest was its identification. It was about 3 metres from the ground, somewhat high up for this species, and I jumped, grasping it with my hand. Upon examining it, much to my surprise, it was a female of *C. celis* and not another species. Somewhat disappointed, I was

walking away and about to place the specimen in a container when I observed a momentary chirping sound and observed what may have been 'wing clapping' by the rapid flicking of the female forewings together. Although only briefly observed, this appeared to involve the striking of the forewing costa adjacent the cell, roughly above the second abdominal segment and cruciform elevation of the thorax. This movement was regular and not the typical frantic flapping of a distressed adult attempting to escape my hold. Audible stridulatory sounds, similar to those heard prior to capture, were emitted by the female now held between my fingers. Sound production frequently occurs when holding males this way but the sound produced by the female was not a distress call. Such simultaneous active wing movement was not observed whilst the female was stridulating in the hush - it appeared comparatively still. Her sound activity was not repeated again for me to study further.

The male heard before from 10 metres distant was now some 2 metres away and immediately (within 3 seconds of her song) appeared on my sleeve, although I did not see him fly there. Despite probing and handling the male, he could not be encouraged to fly away whilst I held the female between my fingers and I suspected the female was releasing pheromone as the male was obviously intent on remaining on my person, quite contrary to the normal behaviour of this species. Moulds (1990) commented that wing flicking movements in females of a *Cystosoma* species aid in dispersing pheromones when in close proximity to males. The most recent call of the female was not a distress signal as the male was not wary. The presumed pheromone released by this female appeared to override the male's normal avoidance of predators and moving objects. However, unlike some species, the male did not alter his song after arriving near the female. Indeed, the male did not make further calls.

Time did not permit further observations and the two adults were placed in a single container where mating presumably took place. Unfortunately this container was not transparent and I did not observe this component of the courtship. About 10 to 15 minutes later the male began singing once again and repeated this the afternoon of the following day [temp. 20°C] after it was transferred to a clear container with foliage and placed near a window indoors. Despite retaining the female in captivity for a few days, no further sounds were produced by her. Handling the female after mating did not promote any sounds as it did when the male was handled similarly. She remained mostly inactive settled on the side of the container, but the following day made attempts to exit via a larger air hole in the lid and after failing to do so remained near this opening. I suggest that female sound production, presumably by wing clapping or a method otherwise unknown, ceases after recent mating and is a mate attracting

strategy. Presumably females home in on male aggregations [there is probably some attraction between males also to form such aggregations] and then when nearby, commence their own sound production to encourage the male(s) to approach and copulate. Such a strategy would reduce the females' likelihood of predation if it is the male which actively seeks at this close range.

**Summary:** My observations given above provide evidence of the existence of a similar sounding, but audibly separable, song of unmated female of *C. celis* which is used to attract nearby males. The means of creating this sound is not clear. The wing movements observed in the captured female almost certainly represent the 'wing clapping' referred to by Moulds (1990) in other Australian cicadas. This is apparently one of the few records of sound production in female Australian cicadas.

### References

- Gwynne, D. 1987. Sex-biased predation and the risky mate-locating behaviour of male tick-tock cicadas (Homoptera: Cicadidae). *Animal Behaviour* 35(2): 571-576
- Moulds, M.S. 1988. The status of *Cicadetta* and *Melampsalta* (Homoptera: Cicadidae) in Australia with the description of two new species. *General and Applied Entomology* 20: 39-48
- Moulds, M.S. 1990. *Australian Cicadas*. New South Wales University Press, Sydney.

NOTES ON *STIGMODERA (CASTIARINA) DECIPIENS* WESTWOOD  
(COLEOPTERA: BUPRESTIDAE), A RARE JEWEL BEETLE  
FROM COASTAL QUEENSLAND AND NEW SOUTH WALES

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**Abstract:** The tropical/sub-tropical, rain forest and vine thicket tree, *Clerodendron floribundum* R. Br. (Verbenaceae) is recorded here for the first time as a larval host plant for the rare jewel beetle *Stigmodera (Castiarina) decipiens* Westwood (Coleoptera: (Buprestidae), which occurs in the vine thickets of *Eucalyptus-Banksia* woodlands/heathlands of north-eastern New South Wales. The beetle is poorly represented in museum collections and may be nearing extinction because of habitat destruction caused by bushfires and clearing for residential development.

*Stigmodera (Castiarina) decipiens* Westwood (Buprestidae) is a poorly known jewel beetle which has been listed previously as occurring in Queensland only (Carter 1929, Barker 1979). During late October 1990, I noticed a sickly looking sapling (2.5m high with a stem diameter of 3.5-4.5 cm) of *Clerodendron floribundum* R.Br. (Verbenaceae) growing in pale grey sand in a shady situation in a small vine thicket in a *Eucalyptus-Banksia* woodland (adjacent to a swamp with *Gahnia sieberiana* Kunth, (Cyperaceae) and *Xanthorrhoea* sp., (Xanthorrhoeaceae). The sapling of *C. floribundum* was the only one of the species in the surrounding area of native vegetation (c. 0.5 km diameter). Cutting into one part of the stem, which was necrotic, revealed that most of the central part (pith and secondary xylem) was dead and that the only portion of the stem that was alive was the thin layers of primary xylem and phloem situated below the layer of bark. Further dissection of the sapling revealed a pupa (in its pupal chamber) of a buprestid beetle which was at an advanced stage of sclerotization into the teneral adult. Since the sapling was also heavily infested with termites and was likely to die in the near future, I cut it down at base level (leaving the lignotuber for regeneration) and undertook a complete dissection of the sapling. This revealed a further three pupae, one teneral adult which had not as yet developed full sclerotization and colouration and one apparent last instar larva, all of which were preserved in 70% alcohol and now reside in the author's collection. Comparison with an old specimen lodged in the insect collection of the Entomology Section, Department of Primary Industries, Indooroopilly, Brisbane, indicated that the material from Hastings Point, belonged to

*Stigmodera (Castiarina) decipiens* Westwood. My material and present report represents: (a) the first published record of *S. decipiens* from New South Wales, (h) the first recorded larval host plant for *S. decipiens*, and (c) the first species of Buprestidae recorded breeding in *Clerodendron floribundum*.

I have little doubt that *S. decipiens* is a rare species of Buprestidae which is probably severely threatened with extinction. I have undertaken much field research on the Buprestidae of the north-eastern New South Wales region since 1984 and have not collected any adults of *S. decipiens* on native or non-native plants in the field. It is possible that after emergence, adults feed on the flowers or foliage of *C. floribundum*, but there are presently no observations to verify or disprove this suggestion.

The colour of *S. decipiens* is mostly orange with black markings on the head and pronotum; the elytra are dark orange with a small black apical patch. This colour pattern suggests that *S. decipiens* is a lycid mimic, closely related to another mimic, *S.(C.) loriae* Kerremans, from coastal north-eastern Queensland (Hawkeswood 1990). In Australia, many lycid beetles (Lycidae) which are apparent models for other insects belong to the genus *Metriorrhynchus*, adults of which may exude noxious white fluid from ducts on the sides of the pronotum and from the anus when handled or disturbed. *Metriorrhynchus* adults are usually attracted to nectar-bearing flowers of the Myrtaceae, particularly *Leptospermum* (e.g. Nicolson 1927; Hawkeswood 1987). In the Hastings Point area, *Metriorrhynchus* species are to be found in limited numbers during summer on *Leptospermum*, *Melaleuca* and *Eucalyphus* flowers (all Myrtaceae) but as yet, adults of *S. decipiens* have not been found in this niche co-existing with the lycid beetles.

This is unusual, since *Stigmodera* species are usually nectar feeders in the adult stage, and mimics and their models are usually found together, occupying the same niche(s).

I suspect that *S. decipiens* may not be a nectar-feeder but possibly an obligate leaf-feeder, although at this stage there is no supporting evidence for this suggestion.

The larval host plant, *Clerodendron floribundum* is a small to medium-sized tree growing to 20 metres in height, with opposite, simple but not toothed, elliptical to ovate leaves measuring 8-15 cm long, and numerous white fragrant flowers arranged in cymes in the upper axils of the

leaves (Floyd 1989). It is usually found in or near rain forest or sporadically in moist vine thickets from Cape York Peninsula to central coastal New South Wales. The coleopterous fauna associated with this plant has not been examined in any detail, although Hawkeswood (1988) recorded the chrysomelid beetle *Phyllocharis cyanipes* (Fabricius) feeding on the foliage of young saplings of *C. floribundum* in the Townsville district, northern Queensland; however, Buprestidae were not found on the same plants at the various sites at Townsville (Hawkeswood, 1990). The larval association of *S. decipiens* with *C. floribundum* is of interest and probably represents a co-evolutionary relationship. Many areas where *C. floribundum* grows in north-eastern New South Wales are presently under threat from hushfires and land-clearing and it is most likely that if *C. floribundum* is the only larval/adult host for *S. decipiens*, that extinction of this beetle in this region will soon occur as a result. It would be a pity if this attractive and interesting beetle was to vanish from the face of the earth before we are able to gain sufficient information about its ecology, evolutionary history and taxonomic affinities.

#### Acknowledgments

I would like to express my thanks and memory to the late Mr K J Houston, DPI, Indooroopilly, who allowed access to their insect collection and to Mr L Jessup, Queensland Herbarium, who verified my identification of *Clerodendron floribundum*.

#### References

- Barker, S. (1979). New species and a catalogue of *Stigmodera* (*Castiarina*) (Coleoptera: Buprestidae). *Transactions of the Royal Society of South Australia* 103: 1.23.
- Carter, H.J. (1929). A check list of the Australian Buprestidae. *Australian Zoologist* 5: 265-304.
- Floyd, A.G. (1989). *Rainforest Trees of Mainland South-eastern Australia*. Inkata Press, Melbourne.
- Hawkeswood, T.J. (1987). Pollination of *Leptospermum flavescens* Sm. (Myrtaceae) by beetles (Coleoptera) in the Blue Mountains, N.S.W. *Giornale Italiano di Entomologia* 3: 261-269.
- Hawkeswood, T.J. (1988). A survey of the leaf beetles (Coleoptera: Chrysomelidae) from the Townsville district, northern Queensland, Australia. *Giornale Italiano di Entomologia* 5: 23-30.
- Nicolson, A.J. (1927). A new theory of mimicry in insects. *Australian Zoologist* 5: 10-104.

CAPTURE OF A CABBAGE WHITE BUTTERFLY, *PIERIS RAPAE* L.  
(LEPIDOPTERA: PEIRIDAE) DYED BLUE GREEN

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An exceptionally conspicuous male cabbage white butterfly, *Pieris rapae*, stained with bright blue-green dye was observed flying in the Burnley Gardens, Burnley, Victoria, on 23 January 1992 at about 1.30 pm. I was able to watch it land on various plants and feed at flowers for ten minutes before leaving the scene and returning with a net to capture it. In sunlight its colouration was reminiscent of a common imperial blue, *Jalmenus evagoras*. The specimen died the following day.

Williams (1965) discussed the use of colour dyes to mark butterflies as a tool in migration studies and illustrated the wings of several specimens, including *Pieris*, marked in various ways. Colour stains on naturally white wings are of course particularly obvious. My first thought was that this was a deliberately marked individual although I have heard of no one marking butterflies in this way in Australia (the Australian Museum project headed by C.N. Smithers involved the use of small, numbered, gummed paper tags, like stamp hinges, attached to the forewing).

Second thoughts were that this insect had been accidentally dyed as a result of herbicide spraying at the Gardens. Horticultural staff use blue-green food dyes to colour the poison solution to make it known where spraying has occurred. A gardener shown the captured butterfly agreed that its colour was close to that of the dye lately used. Suitable food plants for the cabbage white larvae occur as weeds along pathways within the Gardens and spraying occurs regularly.

Not only are the wings of the specimen unevenly coloured but the head and body are strongly dyed. This adds weight to my belief that the colouration was accidental, perhaps the result of the larva ingesting sprayed vegetation, or possibly the pupa or adult being sprayed directly. The restricted local movement of the insect over a 20 minute period show it was not migrating and suggest it had not travelled far during its adult life.

However, if someone has been marking butterflies in this way it should be publicised. It would be a pity for possibly useful dispersal information to be lost, as happened in the U.S.A. where the origin of a specimen of goat weed butterfly "*Pyrrhania andria*", captured in 1948 in Kansas with a number printed on its wing, had, by 1965, still not been determined (Williams, 1965).

**Reference**

Williams, C.B. 1965. *Insect Migration*. Second Ed., Collins, London.

## RECENT ARTICLES OF INTEREST

Compiled by Ian Faithfull

**Mansfield trees under threat**, *Mansfield Courier* 19 Sept.1990, pp.1,11. Landscape of the Mansfield district, Vic., will be massively changed due to severe defoliation of *Eucalyptus* by psyllids (Hemiptera : Psyllidae). 100% of trees may be affected and 5% may die, with the 1990 season shaping up as one of the worst on record. The Department of Environment has funded Project Mansfield to study what the understorey vegetation once consisted of and how to re-establish it. Natural predators are in decline and ecologically destructive agricultural practices continue apace. **Museum finds local lerps are deadly**, *Mansfield Courier* 10 Oct. 1990, pp.22-3. *Cardiaspina* lerps are the main cause of decline of *Eucalyptus camaldulensis* in the district.

**Flesh eating worm on its way - vet**, *Herald Sun* 28 Nov.1990, p.39. Dr.M. Woodford of the IUCN veterinarian specialists group says Australia is at risk from infestation by the screwworm fly. Attempts to raise \$80 m. to eliminate the Libyan outbreak (probably arising from American stock) by a sterile release program was unsuccessful and 200 cases of human infection had been reported there. If the fly gets up the nostrils of a person and lays eggs, the untreated larvae would destroy the front of the face and were potentially fatal. Livestock and wildlife can also be killed.

**Patrick Hayes, Designer plants hold mosquitoes at bay**. *The Age*, 5 Dec.1990, p.19. A South Australian company is selling a genetically engineered *Pelargonium*, *citrosium vanleeerii*, developed 15 years ago by a Dutch geneticist & reputed to repel insects. \$8 per pot.

**Robyn Bannister, Honey disease scare**. *Weekly Times* 27 Jun. 1990, p.15. Victorian apiarists have demanded tighter controls on New Zealand honey because of the risk of chalkbrood disease destroying the Australian industry.

**Phil Westwood, Grain coolers kill pests**. *W.T.*, 15 Aug.1990, p.40. Deregulation of the grain industry will probably result in increased use of stored grain insecticides despite growing resistance in grain pests. 10 & 50 kW trailer-mounted McBea grain cooler designed by Brian Elder reduces the temperature of stored seed, suppresses weevil development and inhibits pest population growth. How it works.

**Stephen Hall, Paradise comes with a sting**. *The Age (Extra)*, 3 Nov. 1990, p.4. In September & October people in parts of N.Qld. "give displays of their versions of Greek dancing" in response to attacks by March flies (Tabanidae). Description of attacks on dogs and chickens. "Wear anything blue and instead of the usual five or so flies trying to take your blood, the flies attack in waves as the wearers arms and legs semaphore rage and pain". A repellent concocted from citronella, baby oil, "Dettol", and a few drops of diesel may be effective & tropical strength "Aeroguard" is also recommended. "For full success ... you have to spray it all over your body" otherwise "the march flies will drill through your shirt".

**Ihuw Morgan, Swan Hill hit by fruit fly infestation**. *W.T.*, 5 Sept.1990, p.25; **Fruit fly sparks dump fear**, *Sun Herald* (Melb.), 2 Feb. 1991, p.18. Findings of *Dacus tyroni* from hackyard trees in Swan Hill (Jan.1990) and Sheparton, Mooroopna & Wodonga (early 1991) mean fruit cannot be sold in foreign and some interstate markets without cold sterilisation which lowers returns to growers and reduces fruit quality.

**Barbara Wenzel, A rose-lover declares war on Melbourne's army of thrips**. *The Age*, 11 Dec.1990, p.22. Melbourne's "apparently inevitable" spring plague of Thysanoptera "largely confined" to pale coloured roses. "Swift and total devastation ... when the first north wind



blows" with every single flower "reduced in hours to brown, papery husks". Suggests that Melbourne is so overplanted with *Rosa* "iceberg" that a thrip breeding haven has been created. Why does it happen and what can be done?

S. Young, **Dragonflies help to defeat dengue fever.** *New Scientist* 130(1776):16, 27 Apr. 1991. 98% of dengue fever vector mosquito *Aedes aegyptii* in Rangoon, Myanmar, live in domestic water jars. But community cooperation in releasing larvae of the dragonfly *Crocothemis servilla* into the jars resulted in a very high level of control (*Bull.Ent.Res.* 80:223).

S. Young, **How plants fight back.** *New Sci.* 130(1771):31-5, 1 Jun.1991. Evolutionary pressures of herbivores on size and shape of leaves. Plant mimicry of other inedible plants, leaves that mimic already damaged leaves. Large headed insects feed on tougher plants than small headed. Insects consume 150 billion tonnes of plants per year, much of it cellulose, which few insects can actually utilise nutritionally. Termites & some cockroaches are specialists at cellulose digestion. Reasons why more animals don't photosynthesise like the sea slug *Elysia*.

Brett Wright, **Slizing up the subtle effects of pollution.** *New Sci.* 22 June 1991, p.3. A new technique, fluctuating assymetry, based on measurements of the bilateral (left-right) symmetry in the body of insects and developed to detect early signs of pollution and environmental stress, is to be used to monitor the impact of a controversial chemical plant on the Black Sea. The \$150,000 contract will be the first large scale test of the technique.

**How a parasitic fly can fool bumble bee studies.** *New Sci.* 130(1775):18. 29 Jun. 1991. Adult conopid flies parasitise bumble bee workers on flowers and the parasitoid larva radically changes the bee's behaviour. Only 6% of bees in the hive were parasitised but up to 70% of those outside the nest. Models of insect foraging based on bumble bees may thus be seriously flawed (*Animal Behaviour*, 41:910).

I.Anderson, **Is Australian fossil the ancestor of all insects?** *New Sci.* 131(1782):13. 17 Aug.1991. K. McNamara of the Western Australian Museum has found the fossil of a new genus of cuthycaroid in 420 million year old sandstone at Murchison River Gorge which could be the "missing link" in insect evolution. Oldest fossil insects are dated to 375 million years ago.

R.Manning, **Stinging article.** *Australian Natural History* 23(8):588. Autumn 1991. Letter re honey bees and deleterious effects on native fauna.

J.D. Stockard, **Zapped.** *ANH* 23(9):678, Winter 1991. Concern about "environmentally friendly" electronic insect killers which indiscriminately attract and kill large nos. of a wide variety of insects.

S.H., **Calling caterpillars mimic ants.** *ANH* 23: 678. Some butterfly larvae including the common imperial blue mimic the vibratory and stridulatory signals of ants in order to receive the ants' protection (*Science* 248:1104-6).

G.McDonald, **Factors influencing oocyte dev. in *Mythimna convecta* and the possible impact on migration** In *E. Aust. Bull.Ent.Res.* 81:175-84, 1991. Effects of crowding and photoperiod on egg dev. Female moths & larvae reared under long day length result in moths with slow oocyte dev. & smaller eggs. Delays in reaching reproductive maturity induced by larval crowding or summer conditions may assist the moth to emigrate from unfavourable habitats.

G.McDonald, Simulation models for the phenological dev. of *Mythimna convecta* (Lep.: Noctuidae). *Aust.J.Zool.* 38: 649-63, 1990. Larval armyworms reared in lab at various temperatures, mathematical models derived to predict development rate.

G.McDonald, K.P.Bryceson & R.A.Farrow, The development of the 1983 outbreak of the common armyworm, *Mythimna convecta* (Walker), in eastern Aust. *J.Appl.Ecol.* 27:1001-19, 1990. Detailed analysis of climate, veg. etc. and the outbreak which began 6 months post drought. Inland grasslands of SW and cent. Qld. probable source of moths which through complex dispersal on prefrontal weather systems and overlapping generations of offspring, colonised Vic. & NSW.

G.McDonald, Oviposition & larval dispersal of *M.convecta*. *Aust.J.Ecol.* 16:385-93. Eggs are laid in highest densities where green & dry grass are present together & in crevices where plant parts are in close contact. 93% of 1st instar larvae disperse on fine silk threads & 43% move more than 1 m in 0.5 m/s air currents.

T.J.Hawkeswood, Zur biologie von *Phlaeogymna dorsalis* Pascoe (Coleoptera: Curculionidae). *Entomologische Zeitschrift* 100:303-5. Biology of a Qld. weevil, and new host plant *Astrotricha longifolia* (Araliaceae) (In German).

T.J.Hawkeswood, Notizen zu biologie und Wirtspflanzen des Australischen rublers *Rhinotia haemoptera* (Kirby) (Coleoptera: Belidae). *Ent.Zeit.* 100:444-8. Obs. & lit. review of biol. & host plants of the common red belid.

T.J.Hawkeswood, Insect pollination of *Bursaria spinosa* (Pittosporaceae) in the Armidale area, New South Wales, Aust. *Giornale Italiano di Entomologica* 5:67-87. Detailed study of 38 Lep., Coleop. Dipt. & Hymen. spp. coll. from fls. Examined for presence of pollen & places of pollen depos. Feeding and flight behav. of the common spp. Length of feeding bouts. Beetles (Bupr., Cerambyc., Scarab., & Mordellid.) & wasps (Scoliidae) most important pollinators.

N.L.Evenhuis (Ed.), *Catalog of the Diptera of Australasian and Oceanian Regions*. Bishop Museum & E.J.Brill, 1989. 1155 pp., ca.\$156. Complete catalog. incl. Antarctic and subantarctic island fauna & fossil Diptera.

K.Fujii, A.M.R.Gatehouse, C.D.Johnson, R.Mitchel, T.Yoshida (Eds.), *Bruchids and Legumes : Economics, Ecology and Evolution*. Procs. of the 2nd Internat.Sympo., Japan, Sept. 1989. Kluwer Publishers, May 1990, 432 pp. ca.\$219. Seed weevils.

A.R.McCaffery & I.D.Wilson (Eds.), *Chromatography and Isolation of Insect Hormones and Pheromones*. Procs. 1st Intern. Symp. organised by Chromatog. Soc. & Roy.Ent.Soc.London, U.K., March 1989. Plenum Press, 1990, ca.360 pp. \$115.25. Ca.30 articles on juvenile hormones, ecdysteroids, peptides, thin layer, liquid & gas chromatography, mass spectroscopy, computerised pattern recognition, etc.

J.Sudd & N.Franks, *The Behavioural Ecology of Ants*, Blackie, 1987, 224 pp. \$31.75. Colony social architecture, diversity, reprod. strategies, conflict in colonies, division of labour, communication, inter colony relationships, etc.

Thanks to G.Monteith, D.Crosby, P.Carwardine, K.Dunn & T.Hawkeswood for forwarding material for inclusion in this column.

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#### MORE VIC ENT TRIVIA

Here are the answers to those too trivial to remember!  
(Questions are on p.27).

- |                                  |                   |
|----------------------------------|-------------------|
| 1. 7 years                       | 9. Graeme Krake   |
| 2. 30 000 specimens              | 10. 13 years      |
| 3. Michael Brahy and Kelvyn Dunn | 11. Bill Frost    |
| 4. Wickliffe, Victoria           | 12. 10 drawers    |
| 5. Ted Edwards                   | 13. Max Moulds    |
| 6. Trevor Hawkeswood             | 14. Deniss Reeves |
| 7. David Holmes                  | 15. 11 April 1991 |
| 8. Wollongong NSW                |                   |

## MORE VIC ENT TRIVIA

by Jody Dunn

Don your thinking caps. Here's another quick trivia quiz for a bit of fun. These questions are out of the issues from 1990 onwards. Have a go and see how many you can get without looking up your magazines or peeking at the answers! (on page 26).

1. At what age did Dr Ross Field start collecting butterflies?  
- August 1991 edition
2. How many individual specimens does the refurbished Victorian Agricultural Insect and Arachnid Collection contain?  
- Dec.1990 edition
3. The lycenid butterfly *Catopyrops florinda estrella* was recorded in the Bluewater State Forest by which two members?  
- April 1991 edition
4. Where was F.P. Dodd born?  
- October1991 edition
5. A member of the society was fighting for the conservation of the threatened moth, *Synemon plana*. His defence received publicity in a local newspaper. Who was this member?  
- October 1990 edition
6. Which member was honoured with the title of 'Fellow of the Linnean Society'?  
- August 1990 edition
7. A number of members appeared in a photograph of somebody's "bug room" on an excursion. Whose "bug room" was it?  
- December 1990 edition
8. Where did C.J. Muller record a new southern limit for the skipper, *Telicota colon argeus*?  
- June 1991 edition
9. Who discovered a dynastid beetle impaled on a barbed wire fence at Cape Tribulation?  
- April 1991 edition
10. How old is Mark Schulze, the presently youngest member of the society?  
- June 1991 edition
11. One member is believed to be "possibly the only individual in Australia who frequents sleazy nightclubs for the sole purpose of 'picking up' beetles. Who is this member?  
- December 1990 edition
12. How many drawers full of lemon migrant butterflies, including overseas representatives, are there in the South Australian Museum?  
- April 1991 edition
13. Which member won the Whitley Medal for the most outstanding book on Australian Zoology?  
- August 1990 edition
14. Who received the J.C. LeSouef Memorial Award for 1990?  
- February 1991 edition
15. What was the date of the First Day of Issue for the bogong moth stamp? - April 1991 edition

## ON THE GRAPEVINE

Peter Carwardine continues his active involvement with numerous non-entomological societies and has recently helped found a group specifically to publish books.

Les Ring recently visited the Cooktown region and the Palmer river hilltop in search of rare lycanids. He has since departed for Western Australia and intends to visit Victoria on his return route.

In November Michael Braby ascended Mount Elliot near Townsville in the hope of discovering a population of the Helena Brown but returned unsuccessful. He has since ventured south to the Eungella Range with the intention of rediscovering populations of butterflies otherwise known from Mackay only from historical material. The Eungella Range represents an isolated rainforest which he believes could reveal intermediate localities for some species. Michael saw Kelvyn Dunn in Melbourne and Fabian Douglas near Wollongong NSW on an unexpected visit to south-eastern Australia during late December 1991 and early January of this year. Michael was keen to discuss his recent observations on seasonal variation in certain northern species and share his experiences on Cape York Peninsula. Michael relayed his misfortune whilst investigating the Finch Hatton Gorge near Mackay in late November; he was swept down stream and over a waterfall, smashing his teeth and face on rocks, before being dumped in a shallow pool. A frightful dental bill resulted. Michael found the cool temperate weather unbearably cold for summer and hastily returned to the tropics to continue his acclaimed research on the northern bushbrown butterflies.

Chris Muller of Dural NSW has been extremely busy over the summer school vacation. Having only just obtained his probationary licence, Chris has not wasted any time fitting in as many collecting trips to his sites as possible. He has also been absorbed in breeding the local skipper butterflies. Before returning to school in February, he anticipates visiting the Barrington Tops and possibly slotting in a quick trip to south-western Queensland.

Peter Fox travelled to northern Queensland during last November progressing as far north as Cardwell where he was accompanied by Michael Braby and Kelvyn Dunn to the nearby Kirrama Ranges. He found Helena Browns in abundance with several females being present. Peter also spent some time with Kelvyn hunting around the Townsville region turning up some *Hypochrysops* species as well as several larvae and pupae of the common awl and the Regent skipper. Conditions were very dry but in the artificially wet spots, such as the local Botanic Gardens, Peter found a number northern species he desired for his reference collection. A hike through the hills west of Paluma with Michael resulted in the sighting of a few of *Ogyris* but netting these proved easier said than done. A fresh male *O. iphis* made his trip well worth while though. He also returned with a few host plants from the local nurseries for his garden at Pialba.

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## CONTRIBUTIONS TO THE *VICTORIAN ENTOMOLOGIST*

The Society welcomes contributions of articles, papers or notes pertaining to any aspect of entomology for publication in this Bulletin. Contributions are not restricted to members but are invited from all who have an interest. Material submitted should be responsible and original. Statements and opinions expressed are the responsibility of the respective authors and do not necessarily reflect the policies of the Society.

Contributions may be typed on A4 paper or *preferably* sent on an IBM formatted disk in *Word Perfect* or other word processing package (clearly specified) with an enclosed hard copy print out. Urgent submissions may be faxed.

The deadline for each issue is the final Friday of each odd month.

## ADVERTISING

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## DIARY OF COMING EVENTS

### 21 February - General Meeting

"Biological control of Insects on Trees - The Australia - California connection" by Dr Don Dahlston

20 March - Council Meeting

### 24 April - General Meeting (note not the third Friday)

"South African insect fauna with potential for biocontrol of Bonaseed & Bitou bush in Australia" by Robin Adair

15 May - Council Meeting

Scientific names contained in this document are *not* intended for permanent scientific record, and are not published for the purposes of nomenclature within the meaning of the *International Code of Zoological Nomenclature*, Article 8(b). Contributions are not refereed, and authors alone are responsible for the views expressed.